

What Is Claimed Is:

1. An optical data recording and storage medium that includes a first reflective layer formed from a silver alloy comprising silver and from about 0.1 to about 4.0 wt.%, based on the total weight of alloy, of samarium (Sm).
2. The optical data recording and storage medium of claim 1 wherein silver alloy comprises from about 0.2 to about 1.0 wt.%, based on the total weight of alloy, of samarium (Sm).
3. The optical data recording and storage medium of claim 1 wherein silver alloy comprises from about 0.25 to about 0.35 wt.%, based on the total weight of alloy, of samarium (Sm).
4. The optical data recording and storage medium of claim 1 wherein silver alloy further comprises copper (Cu).
5. The optical data recording and storage medium of claim 4 wherein silver alloy comprises from about 0.2 to about 2.0 wt.% copper (Cu).
6. The optical data recording and storage medium of claim 5 wherein silver alloy comprises from about 0.25 to about 1.0 wt.% copper (Cu).
7. The optical data recording and storage medium of claim 1 wherein silver alloy further comprises titanium (Ti).
8. The optical data recording and storage medium of claim 7 wherein silver alloy comprises from about 0.05 to about 0.5 wt.% titanium (Ti).
9. The optical data recording and storage medium of claim 8 wherein silver alloy comprises from about 0.1 to about 0.3 wt.% titanium (Ti).

10. The optical data recording and storage medium of claim 1 wherein silver alloy further comprises manganese (Mn).
11. The optical data recording and storage medium of claim 10 wherein silver alloy comprises from about 0.1 to about 1.5 wt.% manganese (Mn).
12. The optical data recording and storage medium of claim 11 wherein silver alloy comprises from about 0.2 to about 0.8 wt.% manganese (Mn).
13. The optical data recording and storage medium of claim 1 wherein silver alloy further comprises aluminum (Al).
14. The optical data recording and storage medium of claim 13 wherein silver alloy comprises from about 0.1 to about 0.8 wt.% aluminum (Al).
15. The optical data recording and storage medium of claim 1 wherein silver alloy comprises from about 0.2 to about 0.4 wt.% aluminum (Al).
16. The optical data recording and storage medium of claim 1 wherein silver alloy further comprises a precious metal selected from the group consisting of gold (Au), palladium (Pd), platinum (Pt), and mixtures thereof, in a total amount of up to about 2.5 wt.% of the alloy.
17. The optical data recording and storage medium of claim 1 wherein silver alloy further comprises copper (Cu), titanium (Ti), and manganese (Mn).
18. The optical data recording and storage medium of claim 17 wherein silver alloy comprises from about 0.25 to about 0.35 wt.% samarium (Sm), from about 0.25 to about 1.0 wt.% copper (Cu), from about 0.1 to about 0.3 wt.% titanium (Ti), and from about 0.2 to about 0.8 wt.% manganese (Mn).

19. The optical data recording and storage medium of claim 18 wherein silver alloy comprises about 0.3 wt.% samarium (Sm), about 0.7 wt.% copper (Cu), about 0.2 wt.% titanium (Ti), and about 0.5 wt.% manganese (Mn).

20. The optical data recording and storage medium of claim 1 wherein said first reflective layer comprises a thin film semi-reflective layer.

21. The optical data recording and storage medium of claim 1 further comprising a second reflective layer.

22. The optical data recording and storage medium of claim 1 comprising a DVD.

23. The optical data recording and storage medium of claim 1 comprising a high-density disk readable by a high frequency blue light laser.

24. A silver alloy comprising silver and from about 0.1 to about 4.0 wt.%, based on the total weight of alloy, of samarium (Sm).

25. The silver alloy of claim 24 comprising from about 0.25 to about 0.35 wt.%, based on the total weight of alloy, of samarium (Sm).

26. The silver alloy of claim 24 further comprising a metal selected from the group consisting of copper (Cu), titanium (Ti), manganese (Mn), aluminum (Al), gold (Au), palladium (Pd), platinum (Pt), and mixtures thereof.

27. The silver alloy of claim 26 further comprising from about 0.2 to about 2.0 wt.% copper (Cu).

28. The silver alloy of claim 26 comprising from about 0.25 to about 0.35 wt.% samarium (Sm), from about 0.25 to about 1.0 wt.% copper (Cu), from about 0.1 to about 0.3 wt.% titanium (Ti), and from about 0.2 to about 0.8 wt.% manganese (Mn).